

## A NEW SET OF CLAIMS FOR SUBSTITUTION UNDER ARTICLE 19

5    What is claimed is:

22. A carbon flexible heating structure formed by molding a  
conductive composition obtained by mixing liquid silicon rubber  
and carbon black at a weight rate in a range of 100:1~15 into  
10    a particular shape and curing a mixture,  
wherein the carbon flexible heating structure is a reinforcing  
material of a conductive composition filled with short staples.

23. The carbon flexible heating structure of claim 22, wherein  
15    the diameter of the short staple is 1 through 50  $\mu$ m and the short  
staple is one of a glass fiber, a carbon fiber, and a graphite  
fiber.

24. A carbon flexible heating structure formed by molding a  
20    conductive composition obtained by mixing liquid silicon rubber  
and carbon black at a weight rate in a range of 100:1~15 into  
a particular shape and curing a mixture,  
wherein the carbon flexible heating structure has the shape of  
a mesh, and

25    wherein the mesh is a fabric made of a woof and a warp and has  
port portions formed longer than the woof or the warp of the  
fabric, and the port portions are formed of a conductive metal  
wire having superior conductivity.

30    25. The carbon flexible heating structure of claim 24, wherein  
the port portions are tin-plated copper wires or silver wires.

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26. A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid silicon rubber and carbon black at a weight rate in a range of 100:1~15 into a particular shape and curing a mixture,

wherein insulation coating formed of an insulating mixture

obtained by mixing liquid silicon rubber and a diluent and agitating a mixture is provided on a surface of the carbon flexible heating structure.

27. A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid silicon rubber and graphite powder at a weight rate in a range of 100:10~150 into a particular shape and curing a mixture,

wherein the carbon flexible heating structure is a reinforcing material of a conductive composition filled with short staples.

28. The carbon flexible heating structure of claim 27, wherein the diameter of the short staple is 1 through 50  $\mu\text{m}$  and the short staple is one of a glass fiber, a carbon fiber, and a graphite fiber.

29. A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid silicon rubber and graphite powder at a weight rate in a range of 100:10~150 into a particular shape and curing a mixture,

wherein the carbon flexible heating structure has the shape of a mesh, and wherein the mesh is a fabric made of a woof and a warp and has port portions formed longer than the woof or the warp of the fabric, and the port portions are formed of a conductive metal wire having superior conductivity.

30. The carbon flexible heating structure of claim 29, wherein

the port portions are tin-plated copper wires or silver wires.

5 31. A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid silicon rubber and graphite powder at a weight rate in a range of 100:10~150 into a particular shape and curing a mixture,

10 wherein insulation coating formed of an insulating mixture obtained by mixing liquid silicon rubber and a diluent and agitating a mixture is provided on a surface of the carbon flexible heating structure.